

Title (en)
THERMO-ELECTRIC CAPACITOR

Title (de)
THERMOELEKTRISCHER KONDENSATOR

Title (fr)
CONDENSATEUR THERMO-ÉLECTRIQUE

Publication
EP 3740997 A4 20220406 (EN)

Application
EP 19738030 A 20190115

Priority
• US 201862617514 P 20180115
• CN 2019071777 W 20190115

Abstract (en)
[origin: WO2019137556A1] Devices that convert heat into electricity, and methods for a fabrication of the same are provided. The asymmetric thermo-electrochemical capacitor uses a GO-based positive electrode and a battery-type negative electrode to open up the operating voltage window and enhance the electrical discharge capacity for converting low-grade heat into electricity with excellent efficiency, fast thermo-charging time, and stable cycles. The thermo-electrochemical device includes a carbon-based positive electrode, a conductive polymer or a metal-organic framework as negative electrode, a current collector, and a porous separator.

IPC 8 full level
H01G 9/042 (2006.01); **H01G 9/028** (2006.01); **H01G 9/21** (2006.01)

CPC (source: EP US)
H01G 9/028 (2013.01 - US); **H01G 9/042** (2013.01 - EP US); **H01G 9/21** (2013.01 - EP US); **H01M 4/583** (2013.01 - EP US); **H01M 4/602** (2013.01 - EP US); **H01M 4/623** (2013.01 - EP); **H01M 14/00** (2013.01 - EP); **H01G 9/028** (2013.01 - EP); **Y02E 60/10** (2013.01 - EP); **Y02E 60/13** (2013.01 - EP)

Citation (search report)
• [X] WO 2017143273 A1 20170824 - TEXAS A & M UNIV SYS [US]
• See references of WO 2019137556A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
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CN 2019071777 W 20190115; CN 201980008360 A 20190115; EP 19738030 A 20190115; TW 107147129 A 20181226; US 201916957959 A 20190115